### **ABSTRACT**

The present invention relates to a catalyzer for clean pulping and process for using the same. The composition of the catalyzer for clean pulping according to the present invention includes sodium salicylate, anion silicic acid softener, cooking aids, liquid(gaseous) chlorine and water. The process for using the catalyzer for clean pulping according to the present invention includes the following steps: 1, cutting and impurities removing for the raw material, 2, feed preparation and impurities removing, 3, dividing into fibers by refining, 4, catalysis copolymerization, 5, refining, 6, concentration and separation 7, pulp bleaching, 8, pulp washing and 9, finished pulp. All kinds of the herbs can be used for the raw material. The advantages of the present invention is shown as the following: 1, It realizes the clean production; it does not need to digest and does not produce black liquor; the process is simple and is performed at normal temperature; the resource of crops is fully used; the effect of water conservation is remarkable; it is very easy to control each stage separately and/or simultaneously.

10

15

### (12) 按照专利合作条约所公布的国际申请

# (19) 世界知识产权组织 国际局



## 

(43) 国际公布日: 2005年6月9日(09.06.2005)

**PCT** 

(10) 国际公布号: WO 2005/052247 A1

(51) 国际分类号7:

D21C 3/02, 3/00

(21) 国际申请号:

PCT/CN2004/001371

(22) 国际申请日:

2004年11月29日(29.11.2004)

(25) 申请语言:

中文

(26) 公布语言:

中文

(30) 4 1712 4

(30) 优先权: 2003年11月28日(28.11.2003) CN

- (71)(72) 发明人/申请人: 程相武(CHENG, Xiangwu) [CN/CN]; 中国北京市北四环中路229号海泰大厦1706号转, Beijing 100083 (CN)。
- (74) 代理人: 北京科龙寰宇知识产权代理有限责任公司 (KELONG INTERNATIONAL INTELLECTUAL PROPERTY AGENCY); 中国北京市海淀区北太平 庄路25号北京豪威大厦315室, Beijing 100088 (CN)。

BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(84) 指定国(除另有指明, 要求每一种可提供的地区保护):
ARIPO(BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), 欧亚专利(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), 欧洲专利(AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

本国际公布:

— 包括国际检索报告。

(81) 指定国(除另有指明,要求每一种可提供的国家保护): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, 所引用双字母代码和其它缩写符号,请参考刊登在每期 PCT公报期刊起始的"代码及缩写符号简要说明"。

- (54) Title: CATALYZER FOR CLEAN PULPING AND PROCESS FOR USING THE SAME
- (54) 发明名称: 清洁制浆催化剂及其应用工艺

(57) Abstract: The present invention relates to a catalyzer for clean pulping and process for using the same. The composition of the catalyzer for clean pulping according to the present invention includes sodium salicylate, amon silicic acid softener, cooking aids, liquid (gaseous) chlorine and water. The process for using the catalyze for clean pulping according to the present invention includes the following steps: (1), cutting and impurities removing for the raw material, (2), feed preparation and impurities removing, (3), dividing into fibers by refining, (4), catalyzing copolymerization, (5), refining (6), concentrating and separating (7), pulp bleaching, (8), pulp washing and (9), finished pulp. All kinds of the herbs can be used for the raw material. The advantages of the present invention are shown as the following: It realizes the clean production; It has no need of digesting and does not produce black liquor. The process is simple and is performed at normal temperature and pressure. The resource of crops is fully used. The effect of water conservation is remarkable. It is very easy to control each stage separately and/or simultaneously.

#### (57) 摘要

本发明涉及一种清洁制浆催化剂及其应用工艺。本发明清洁制浆催化剂由下列原料组成:水杨酸钠、阴离子硅酸软化剂、蒸煮助剂、氯(气)和水。本发明清洁制浆催化剂的应用工艺包括如下步骤:1、将原料破碎除杂;2、备料除杂;3、梳解分丝;4、催化共聚;5、磨浆;6、浓缩分离;7、漂浆;8、洗浆;9、成品浆。各种草本纤维植物都可以作为原料。本发明的优点在于:本发明实现了清洁生产,它不需蒸煮,不产生黑液;其工艺简单;可在常温常压下进行;充分利用农作物资源;节水明显:容易实现连续化生产、模块化生产和自动化生产,并可实现产业化。

WO 2005/052247 A1